



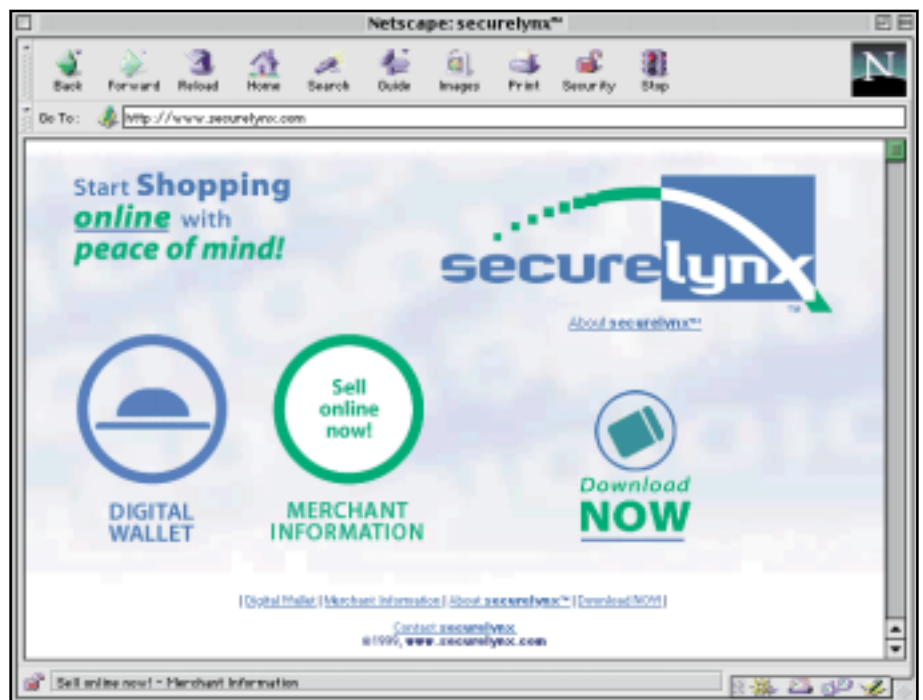
# securelynx builds Web payment gateway with IBM e-commerce solution.

<b>Application</b>	Security-rich online payment service
<b>Business Benefits</b>	Projected 60-month payback period; strong Internet services portfolio with security-rich payment options; extended market reach; traditional business bolstered by e-services
<b>Software</b>	IBM Net.Commerce PRO IBM Payment Suite™ IBM Payment Gateway™ IBM Payment Server™ IBM Consumer Wallet™ IBM DB2® Universal Database™ for AIX® IBM eNetwork™ Firewall
<b>Hardware</b>	IBM RS/6000®

In the virtual business world of the Internet, the overriding concern is security. Enabling secure, online transactions, many believe, will transform the Internet into a thriving Net economy. And, there are clear signals that this transformation is right around the corner. Merchants, financial institutions and Internet Service Providers (ISPs) have invested significant resources to develop online wallets that enable safe, one-click checkout.

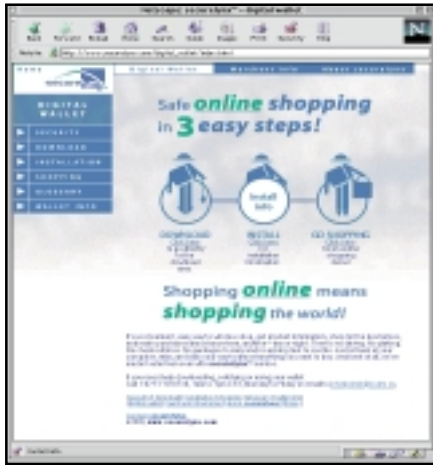
*“IBM is driving the e-business market, sending new opportunities our way. And, while we leverage its market reach, IBM is able to push its solutions through nimble organizations like ours.”*

*—Malcolm Young, Project Manager, CU Electronic Transaction Services*



securelynx provides merchants and customers a highly secure channel for online payments.

*It's about business, not just technology.*



*Shopping with the securelynx digital wallet, based on IBM Payment Suite, is safe and easy.*

In Canada, the first end-to-end Internet transaction based on the SET Secure Electronic Transaction™ protocol and IBM payment technology was conducted by Saskatchewan Telecommunications (SaskTel) and CU Electronic Transaction Services (CUETS) back in July 1997. With its success, the partnership between the two industry leaders matured into a joint venture to develop securelynx, a service that promises customers and merchants a highly secure Internet shopping experience.

Launched in April 1999, securelynx delivers on that promise, offering businesses of all sizes an opportunity to conduct secure, reliable e-commerce. securelynx is based on IBM Payment Suite, which supports the SET™ protocol and the IBM Merchant Originated Payment (MOP) protocol. Early merchant sites connected to the securelynx payment gateway were developed using IBM Net.Commerce PRO merchant server software.

Many innovative businesses are already using securelynx: Flatland Music, which offers non-traditional artists a cost-effective way to enter the mainstream market; CAA Saskatchewan, a motor club and travel agency; Dot.com, a computer software and hardware reseller; Glen Scrimshaw, an independent artist who sells original artwork online; and Rugged Country, an online store selling custom-made bags and leather gloves. Says Malcolm Young, project manager, CUETS, “The Internet is about innovative, emerging organizations, or established ones realigning their business model to take advantage of the Internet’s global reach. securelynx provides such organizations a secure foundation on which to build their e-commerce business models.”

#### **A partnership between industry leaders**

IBM is a big component of that foundation, according to Young. “In a venture like this, you need partners that have the depth and skills needed for the long haul. Not only did IBM provide the best technological solution, it also showed its willingness to commit time and resources to develop e-commerce solutions with us.” CUETS and SaskTel benefit from the IBM Merchant Enablement Program, designed to help financial institutions and ISPs develop complete e-commerce services. Says Cindy Grubb, marketing manager, SaskTel, “We combine the strengths of CUETS, SaskTel and IBM to offer a cost-effective, turnkey e-commerce solution to small and medium businesses that want to sell online.”

SaskTel, a leading telecommunications company based in Saskatchewan, Canada, offered the first high-speed Internet access service based on digital subscriber lines (DSL)—carrying data at high speeds over standard copper telephone wires—in North America. Says Grubb, “The securelynx service supports SaskTel’s diversification

*“One of the key advantages of IBM technology, particularly Net.Commerce, is scalability. IBM provides e-commerce solutions for businesses that are very serious about doing business online.”*

*—Cindy Grubb, Marketing Manager,  
Saskatchewan Telecommunications*

strategy and takes us into new and emerging markets.” CUETS, a principal member of MasterCard International, provides financial transaction processing both as a card issuer and a merchant acquirer to more than 600 Canadian credit unions—claiming 95 percent of this services market.

With more merchants and customers conducting online transactions, the customer base for SaskTel’s Web hosting services and CUETS’ electronic transaction services will grow in new directions. “Both of our companies approved a 60-month payback period for this venture,” informs Young. However, there are indications that returns will flow in sooner than projected. “Merchant uptake is picking up,” Young notes.

In conjunction with securelynx, SaskTel has also launched a retail portal Web site at [www.malltitude.com](http://www.malltitude.com). “As part of our value proposition, in addition to hosting merchants’ Web sites, using Net.Commerce, we also list their sites at our shopping portal,” says Grubb. “As more and more merchants are listed at malltitude.com, we will drive traffic to their Web stores through this portal. So, not only are we helping merchants get started with e-commerce, but we’re also working to ensure their success in the long run.” The retail portal also uses the securelynx service for online payments.

### **Offering security-rich online payments**

By supporting both SET and MOP transactions, securelynx provides a fast and easy channel to securely process online payments and connect consumers and merchants on the Internet. The MOP protocol allows CUETS to process all card brand transactions using one merchant digital certificate. Customers are issued securelynx digital wallets. IBM Consumer Wallet—a Web browser helper application for the management of payment cards and digital certificates—provides the interface on the merchant’s Web site, hosted at SaskTel’s server farms. Consumer Wallet prompts customers for their passwords before opening the payment window to make a purchase. IBM Payment Server (now part of IBM WebSphere™ Payment Manager), a secure electronic cash register, then authenticates the identification offered by the digital wallet and routes the payment requests through IBM Payment Gateway to CUETS’ back-end authorization systems. IBM Payment Gateway handles certification management, routing, decryption and encryption. Once the transaction is approved, the authorization number is communicated to the merchants and they can then ship the goods or services requested by the customer. At no point does the merchant have access to the encrypted credit card information. IBM eNetwork Firewall provides further security for sensitive information stored in CUETS’ back-end systems.

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*—Malcolm Young*



*The retail portal, [www.malltitude.com](http://www.malltitude.com), will support long-term growth of Internet business ventures.*

All the software runs on multiple IBM RS/6000 F50 servers, with High Availability Cluster Multi-Processing (HACMP) for AIX to ensure uptime. Additional IBM 4758 cryptographic coprocessors ensure significantly higher security and faster transaction processing at the payment gateway. IBM DB2 Universal Database serves as the underlying data repository, storing the electronic catalogs and customer information.

### **IBM—providing scalable, comprehensive solutions**

SaskTel and CUETS evaluated numerous vendors besides IBM for this joint venture. Says Grubb, "One of the key advantages of IBM technology, particularly Net.Commerce, is scalability. IBM provides e-commerce solutions for businesses that are very serious about doing business online." For example, Grubb notes, most customers begin by just presenting their catalog information online, moving quickly to online sales and finally integrating the Web application with their back-end transaction systems, such as SAP or other enterprise resource planning (ERP) solutions. "Net.Commerce can scale to accommodate this kind of business growth," Grubb points out.

According to Young, what made IBM the most successful bidder for the project was its ability to provide a comprehensive solution. "IBM was selected because it is an industry leader in the installation of SET payment gateways. They have proven that they are committed to the research and development needed in this area that will sustain us into the future."

Grubb emphasizes that, while there can be many pitfalls in implementing an e-commerce solution, the key to success is building complementary partnerships. "You must realize that you can't do it alone, especially if you want to develop an end-to-end solution," notes Grubb.

Young points out that there is already an increasing trend of partnerships between ISPs, financial institutions and technology vendors to deliver secure e-commerce solutions. "The specialization that each brings is essential," he says. "The pace of technological change and the need to educate the marketplace—both customers and merchants—requires long-term commitment and resources. IBM is driving the e-business market, sending new opportunities our way. And, while we leverage its market reach, IBM is able to push its solutions through nimble organizations like ours."

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